

REMARKS

This Amendment is submitted in response to the Office Action mailed September 24, 2003, which was non-final. In the September 24, 2003 Office Action, the Examiner rejected claims 1-29 under 35 U.S.C. § 103(a) as having been allegedly obvious over *Dupas* in view of U.S. Patent Nos. 5,709,900 (*Miller*), 5,807,601 (*Carpenter*), and 6,113,953 (*McMahon*).

The Applicant appreciates the Examiner's assistance in the examination of this application, and wishes to thank the Examiner for the telephone interview of February 17, 2004. The Applicant has amended the independent claims, Claim 1 and Claim 16, in accordance with the Examiner's instruction to include a temporal limitation with respect to the flow of the core from the cheese product and the migration of water from the core to the outer cheese layer.

The Applicant has amended independent Claim 1 to provide that the core does not substantially flow out of the cheese snack during processing. This amendment finds support in the specification as follows:

The present invention permits co-extrusion and transverse cutting or severance of co-extruded masses having softer and more-liquid cores, without leakage of the core material from the exposed end face(s) of the cheese snack during further processing steps, including packaging. (Application at 2, lines 19-22).

The specification further describes the steps of a preferred embodiment of the invention which includes the transverse cutting or slicing of the cheese snack, which may be performed during processing without leakage from the end faces. (Application p. 5, line 32 - p. 7, line 31). The phrase "when said product is stored at room temperature" is unnecessary or redundant due the added temporal limitation, and has been deleted.

In addition, the Applicant has amended independent Claim 16 to provide that water migration does not occur during the period of shipping of the cheese snack. As set forth in the specification, the reduction of water migration is also an object of one embodiment of the present invention:

[I]t is critical to minimize migration of water and other solutes [between the core and outer cheese layer]. To meet commercial requirements, products have to remain acceptable, judging by organoleptically and microbiological standards, for up to 120 days at storage temperatures of up to about 7°C. The coating, consisting of natural cheeses like cheddar and mozzarella, contains viable culture. Thus, their physicochemical properties will continue to change during refrigerated storage. The core is heat treated with a stabilizing agent to initiate activation and hydration of stabilizing agents.

(Application at 7, lines 9-16).

It will be recognized by those skilled in the art that the 120-day period referred to above comprises packaging, shipping and all or a portion of a shelf-life period of a cheese snack. As stated above, the physiochemical properties of the cheese snack will continue to change during storage; however, prior to storage, water migration do not occur between the core and the outer cheese layer of the cheese snack. Such water migration is reduced for a period up to 120 days (to meet commercial requirements) or more. The phrase "when said product is stored at room temperature" is unnecessary or redundant due the added temporal limitation, and has been deleted.

In response to the Examiner's remaining arguments in the Office Action, the Applicant respectfully submits that none of the prior art references, independently or in combination, refers to, teaches or suggests a product – a cheese snack – having an inner core *normally flowable at room temperature* wherein the core *does not leak or flow out* of the cheese snack when stored at room temperature, or wherein water within the inner core does not migrate from the core to the outer layer or coating. Nothing in the prior art addresses the problems of leakage or migration, nor suggests a solution to the problem of leakage of a core normally flowable at room temperature. Simply put, the

application discloses a product which had not been invented previously, together with the process by which it is made.

The Examiner's principal basis for rejection is that "the use of stabilizers in cheese products is well-known and within the skill of the art." The prior art referenced by the Examiner, however, teaches the use of stabilizers in processed cheeses for purposes other than that for which applicant uses maltodextrine, starch or hydrocolloids: (a) "to aid in improving the melting properties" and "control the moisture content" of the cheese (*McMahon*), and (b) as "mimetics" to attempt to make imitation cheese feel and taste like natural cheese (*Carpenter and Miller*). *Carpenter*, in fact, teaches away from use of starches *as stabilizers* because they are too expensive. The cited references do not suggest or teach the use of maltodextrine, starch or hydrocolloids to prevent (i) leakage from the ends of a cheese snack or (ii) water migration between the core and the outer cheese layer. Moreover, none of the secondary references suggest or teach the use of stabilizers in a more-fluid flavoring core, *e.g.*, a non-cheese core like pizza sauce or salsa.

Also, it is important to note that stabilizers may not be used in natural cheeses such as that in the present invention. When they are, federal regulations require that the cheese snack be labeled as a "processed" cheese.

Dupas, the primary reference, discloses one method by which leakage had been addressed prior to the Applicant's invention: use of a cup or container when a non-cheese core is co-extruded within a cheese outer layer. *Dupas*, however, does not disclose, suggest or teach the use of maltodextrine, starch or hydrocolloids to prevent leakage of a non-cheese core which is normally flowable at room temperature. This is a principal problem which the Applicant's invention solves, as noted in the application: "Another object is to provide an improved composite cheese snack in

which co-extruded flavoring core is formed within an outer annular cheese product such that the flavoring core will not substantially flow out of the exposed end face(s) of the snack when stored at room temperature." (Application at 4, lines 1-4). This stated object contradicts the Examiner's statement that Applicant's invention obtains only "expected results."

The Examiner states that the claims in the present application differ from Dupas only as to the use of additional components. Significantly, however, co-extrusion in *Dupas* is performed in a cold compression process at a temperatures of 0° to 30° C, and its claims are so limited. Applicant's invention, by contrast, provides no such limitation, as core extrusion may be performed "using a conventional cooker-stretcher where cheese enters the extrusion device at temperatures on the order of 54-60°C, but sometimes as high as 75°." (Application at 2, lines 23-25). "In the inventive process, . . . the curd is heated and kneaded with the aid of warm water and twin screws." (Application, p. 5, line 32 through p. 6, line 1). *Dupas*, on the other hand, teaches cooling. "Conventional" equipment, in a normal cheese operation, at normal operating temperatures, is used to produce the Applicant's cheese snack. Cold compression machinery operating at 0° to 30° C is not required.

Based on the foregoing, the Applicant respectfully submits that the Examiner has not demonstrated a *prima facie* case of obviousness. To establish obviousness, (1) the prior art itself must suggest or motivate the modification of a reference or the combination of reference teachings, (2) the prior art must teach or suggest a reasonable expectation of success, and (3) the prior art must teach or suggest all of the claim limitations. M.P.E.P. § 2143. The "teachings of references can be combined only if there is some suggestion or incentive to do so." *ACS Hospital Sys., Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577 (Fed. Cir. 1984).

The problem of leakage from the end face(s) and the problem of water migration between the core and the outer cheese layer, and the unexpected results of managing such leakage and water migration, are clearly described in the specification. There is no teaching or suggestion in the prior art for the combination of characteristics claimed, nor does the prior art discuss any means of optimizing the claimed characteristics. The cited prior art does not disclose all the claimed characteristics of the co-extruded cheese snack, nor does it disclose or identify these characteristics as being of the type that are desired, nor does it disclose the type of experimentation needed to accomplish Applicant's invention. Accordingly, it is respectfully submitted that Applicant's claimed invention would not have been obvious to one skilled in the art.

This Amendment and these remarks are believed to be fully responsive to the Office Action mailed September 24, 2003, are believed to squarely address each and every ground for rejection or objection raised by the Examiner, and are further believed to materially advance prosecution of this application toward immediate allowance.

Formal allowance of claims 1-29, as amended, is therefore courteously solicited.

Respectfully submitted,

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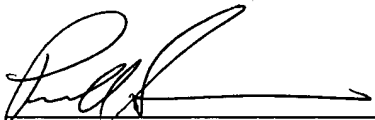
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